

BUTAKOV, I.N., prof., doktor tekhn.nauk

Heat and electric power plant as an element of power engineering systems at the present-day stage of the development of power engineering. Izv.vys.ucheb.zav.; energ. 3 no.4:113-115
Ap '60. (MIRA 13:6)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskii institut imeni S.M.Kirova. Predstavlena kafedroy teploenergeticheskikh ustanovok.
(Power engineering)

S/105/61/000/001/007/007
B012/B059

AUTHORS: Bragin, S. M., Butakov, I. N., Krasin, A. K., Sokolov, A. A.,
Stekol'nikov, I. S., Tareyev, B. M., Fialko, Ye. I.,
Chilikin, M. G., and others

TITLE: On the Fiftieth Birthday of Professor A. A. Vorob'yev

PERIODICAL: Elektrichestvo, 1961, No. 1, p. 93

TEXT: The present article is a short curriculum vitae of the physicist Aleksandr Akimovich Vorob'yev. He graduated at the fiziko-mekhanicheskoye otdeleniye Tomskogo universiteta (Physical and Mechanical Department of Tomsk University) in 1931, became candidate in 1935, and took his doctor's degree in 1939. He became chairman of the kafedra "Tekhniki vysokikh napryazheniy" Tomskogo politekhnicheskogo instituta ("High-tension Engineering" Department of Tomsk Polytechnic Institute), shortly afterwards dean of the energeticheskiy fakul'tet (Power Engineering Department), and later representative director of the Institute of Scientific Work. Since 1944 he has been director of the Tomsk Polytechnic Institute. In 1936, A. A. Vorob'yev established a High-tension Laboratory at the

Card 1/2

On the Fiftieth Birthday of
Professor A. A. Vorob'yev

S/105/61/000/001/007/007
B012/B059

Sibirskiy fiziko-tehnicheskii institut (Siberian Institute of Physics and Technology). In his book "Elektricheskaya prochnost' tverdykh dielektrikov" ("Dielectric Strength of Solid Dielectrics"), which he wrote together with Ye. K. Zavadovskaya, he developed the idea of a mutual dependence of the properties of dielectrics. He advanced the development of television in Siberia. In 1959, Professor A. A. Vorob'yev was elected deputy of the Verkhovnyy Sovet RSFSR (Supreme Council RSFSR). He is holder of the Lenin order, of two orders of the Red Banner of Labor, of the medal "For Brave Work in the Great Patriotic War", of the great gold medal of the Vystavka dostizheniy narodnogo khozyaystva (Exhibition of the Achievements of Political Economics), and of the bronze medal imeni A. S. Popov. At the beginning of 1960 he was awarded the title of an Honored Scientist and Technologist RSFSR. There is 1 figure.

Card 2/2

BUTAKOV, I.N., doktor tekhn.nauk, prof.

Problem concerning the determination of the cost of established
kilowatt of power for condensing electric power stations. Izv. vys.
ucheb. zav.; energ. 5 no.9:57-62 S '62. (MIRA 15:10)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskii
institut imeni S.M.Kirova. Predstavlena kafedroy teploenergeticheskikh
ustanovok elektricheskikh stantsiy.

(Electric power plants)

BUTAKOV, I.N., doktor tekhn.nauk

Concerning S.E.Shitsman's article "Method of accounting for and standardizing the economic and engineering indices of thermal electric power plants." Elek. sta. 33 no.10:89-90 0 '62.

(MIRA 16:1)

(Electric power plants) (Shitsman, S.E.)

BUTAKOV, Innokentiy Nikolayevich, prof., doktor tekhn. nauk;
POLOZHIY, S.V., dots., red.; VOLKOVA, M.I., red.izd-va

[Heat-power systems] Teplosilovye ustanovki. Izd.2., dop.
i ispr. Tomsk, Izd-vo Tomskogo univ., Pt.1. 1963. 264 p.
(MIRA 17:3)

1. Tomskiy politekhnicheskii institut imeni S.M.Kirova
(for Butakov).

ACC NR: AT7003996

SOURCE CODE: UR/0000/66/000/000/0098/0104

AUTHOR: Butakov, L. D.; Lashuk, N. A.; Solntsev, B. A.; Tolmachev, V. I.

ORG: Scientific Research Institute of Nuclear Physics, Electronics, and Automation, Tomsk Polytechnic Institute (Nauchno-issledovatel'skiy institut yadernoy fiziki, elektroniki i avtomatiki pri TPI)

TITLE: High-frequency system for operating an electron synchrotron as a proton-synchrotron

SOURCE: Mezhevuzovskaya konferentsiya po elektronnyim uskoritelyam. 5th, Tomsk, 1964. Elektronnyye uskoriteli (Electron accelerators); trudy konferentsii. Moscow, Atomizdat, 1966, 98-104

TOPIC TAGS: synchrotron, proton, ~~synchrotron~~ *electron*

ABSTRACT: Wide passband and high voltages do not permit using conventional proton-synchrotron-tape aperiodic accelerating systems. Nor can drift tubes or accelerating transformers be used. Hence, two variants of a special accelerator are proposed: (1) Two closely coupled and shunted toroidal resonators (see Fig. 1) and (2) A system of ring electrodes (see Fig. 2). The entire frequency deviation is 9 Mc, and the frequency by the end of the cycle is 36 Mc. The hf channel is divided into two subchannels: a 1.2-Mc one covering most of the cycle and a wide-band one covering the initial part of the cycle. In the ring-electrode design, all long lines are supplied

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ACC NR: AT7003996

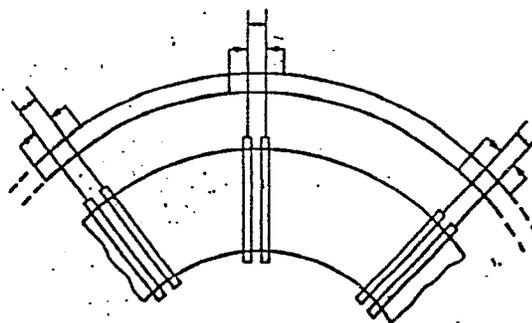
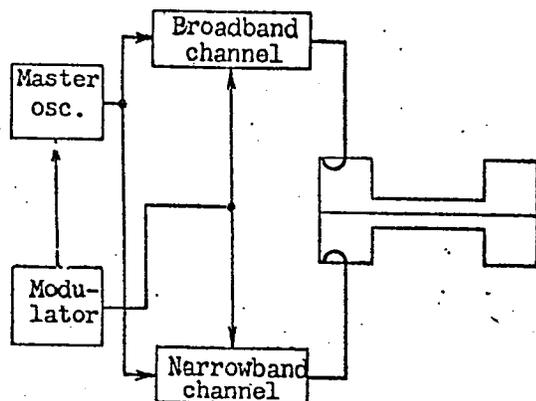


Fig. 1. Two-coupled resonator hf system

Fig. 2. Ring-electrode hf system

by a common feeder system. Some details of the electronic equipment are given. Orig. art. has: 8 figures and 6 formulas.

SUB CODE: 09, 20 / SUBM DATE: 06Mar66

Card 2/2

ACC NR: AT7004003

SOURCE CODE: UR/0000/66/000/000/0249/0253

AUTHOR: Butakov, L. D.; Lashuk, N. A.; Solntsev, B. A.

ORG: none

TITLE: Shaping the long steep-front pulses

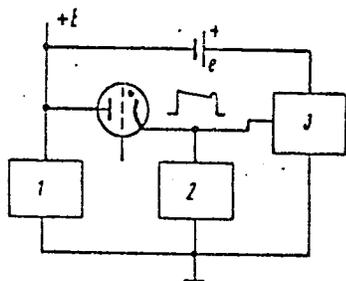
SOURCE: Mezhvuzovskaya konferentsiya po elektronnyim uskoritelyam. 5th, Tomsk, 1964. Elektronnyye uskoriteli (Electron accelerators); trudy konferentsii. Moscow, Atomizdat, 1966, 249-253

TOPIC TAGS: pulse shaper, pulse shape, particle acceleration

ABSTRACT: A method is described of shaping high-power steep-front long pulses intended for anode modulation of a hf oscillator (e.g., in a synchrotron accelerator). Millisecond pulses are shaped by discharging a storage into a load via a hydrogen thyatron (G. W. Wheeler, Rev. Sc. Instr., v. 32, no. 10, 1961). To ensure short time and high efficiency, it is suggested that storage 1 (see figure) be discharged via a thyatron directly into grounded load 2. In this case, the thyatron is to be quenched by a pulse supplied by auxiliary oscillator 3. The expected pulse-rise time

Card 1/2

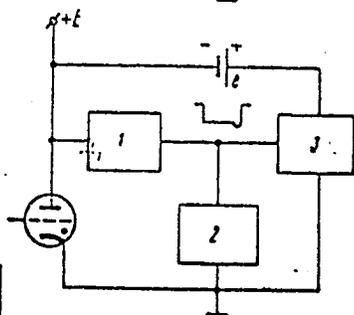
ACC NR: AT7004003



is 20—100 nsec; efficiency, near 100%. The quenching-pulse duration must be 50—500 μ sec. Principal connection diagrams of such (100-kw) pulse shapers are supplied, as are four oscillograms of the pulses. Orig. art. has: 7 figures and 1 table.

SUB CODE: 09 / SUBM DATE: 06Mar66 /

ORIG REF: 001 / OTH REF: 001



Card 2/2

L 33422-66 EWT(1)

ACC NR: AP6013528

SOURCE CODE: UR/0120/66/000/002/0212/0214

AUTHOR: Butakov, L. D.; Solntsev, B. A.

45
B

ORG: Scientific Research Institute of Nuclear Physics, Electronics,
and Automation, TPI, Tomsk (Nauchno-issledovatel'skiy
institut yadernoy fiziki, elektroniki i avtomatiki pri TPI)

TITLE: Pulse generator of 100-kw and 40 μ sec

25

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1966, 212-214

TOPIC TAGS: pulse generator, thyatron, *PULSE SHAPER*

ABSTRACT: A diagram is given in the original article of a square pulse generator of 100 kw and 40 μ sec. Pulses are shaped by the partial discharge of a capacitive accumulator through the thyatron. The front pulse and the clipped pulse are 0.3 and 3 μ sec, respectively. The layout provides for increased efficiency of the thyatron quenching circuit. Orig. art. has: 4 figures. [NT]

SUB CODE: 14/ SUBM DATE: 07Apr65/ ORIG REF: 002/ OTH REF: 001/

Card 1/1 *ULR*

UDC: 621.317.765.4

BUTAKOV, P., inzhener.

More attention to boiler installations in mines. Mast. ugl.5 no.9:
26 S '56. (MLRA 9:10)

1. Energomekhanicheskiy otdel kombinata Kuzbassugel'.
(Kuznetsk Basin--Boilers)

~~BUTAKOV, S.Ye.~~, mayor meditsinskoy sluzhby; PLINER, B.L., mayor meditsinskoy
sluzhby

▲ Alcohol vaccine for treating chronic dysentery. Voen.-med.zhur. no.10:
71-72 0 '56. (MLFA 10:3)
(DYSENTERY) (VACCINES)

L 01073-67 EWT(1)/EWP(m)

ACC NR: AR6028071 (AN) SOURCE CODE: UR/0124/66/000/005/B050/B050

AUTHOR: Butakov, S. Ye. ; Zel'ts, G. A.

43
B

TITLE: Experimental determination of the momentum along an isothermal jet stream /

SOURCE: Ref. zh. Mekhanika, Abs. 5B304

REF SOURCE: Sb. Teoriya i raschet ventilyats. struy. L., 1965, 249-257

TOPIC TAGS: jet flow, jet stream, jet momentum, momentum

ABSTRACT: A description is given of a procedure for determining the momentum of a jet stream by measuring the reaction of the screen exposed to the jet flow. The possibility is considered of measuring small air consumptions by the method of reactions, using a standard analytical scale. A. S. Ginevskiy. [Translation of abstract]

[AM]

SUB CODE: 04/

Card 1/1 vlr

BUTAKOV, S. YE.

"Industrial Aerodynamics." Sub 23 Jun 47, Moscow Order of the Labor Red
Banner Construction Engineering Inst imeni V. V. Kuybyshev

Dissertations presented for degrees in science and engineering in Moscow
in 1947

SO: Sum No. 457, 18 Apr 55

BUTAKOV, S. E.

Aerodinamika sistem promyshlennoi ventiliatsii. Moskva, Profizdat 1949.
268 p. diags.

Bibliography: p. 268-269.

Aerodynamics of industrial ventilation systems.

DLC: TH7684.F2B87

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library
of Congress, 1953.

BUTAKOV, S.

Aerodinamika Sistem Promyshlennoi Ventilatsii (Aerodynamic System of Industrial Ventilation), Moscow, 1949

265 p. 1.75

SO: Four Continent Book List, April 1954

BUTAKOV, S.Ye.

I--t diagram for moist air. Ozdor.usl.trud.na zav. no.5:72-76 '53.
(Air--Purification) (MIRA 8:8)

BUTAKOV, S.Ye.

Initial equations for ejector calculations. Ozdor.usl.trud.na zav. no.5:
77-90 '53. (MIRA 8:8)
(Nozzles)

MIKHEYEV, V.A.; BUTAKOV, S.Ye., doktor tekhnicheskikh nauk, redaktor;
DUGINA, N.A., tekhnicheskiiy redaktor.

[High-pressure hydraulic pumps and pump accumulator stations]
Gidronasosy vysokikh davlenii i naso ano-akkumuliatornye stantsii.
Moskva, Gos. nauchno-tekhn. izd-vo Mashinostroit. lit-ry, 1954.
140 p. (Pumping machinery) (MLRA 8:1)

BUTAKOV, S. Ye.

BUSLIK, N.G.; KOVALEVSKIY, M.M.; YANCHENKO, V.F., kandidat tekhnicheskikh nauk, retsenzent; BUTAKOV, S.Ye., doktor tekhnicheskikh nauk, redaktor; DUGINA, N.A., tekhnicheskiiy redaktor.

[Factory testing of steam turbines and pumps] Zavodskie ispytaniia parovykh turbin i nasosov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1954. 259 p. [Microfilm]
(Steam turbines--Testing) (MLRA 8:4)
(Pumping machinery--Testing)

Butakov, S.Ye.
GLUSHKOV, Leonid Aleksandrovich; BUTAKOV, S.Ye., profesor, doktor
tekhnicheskikh nauk, retsenant; CHEKHAVIN, S.P., redaktor;
LUCHKO, Yu.V., redaktor; KOVALENKO, N.I., tekhnicheskii
redaktor.

[Dust control in ore milling] Bor'ba s pyl'iu pri izmel'chenii
rud. Sverdlovsk, Gos.nauchno-tekhn.isd-vo lit-ry po chernoi i
tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1955. 69 p. (MLRA 8:11)
(Dust collectors) (Ore dressing--Hygienic aspects)

BUTAKOV, S.Ye.

STROVE, E.E.; DIK, I.P.; STARTSEV, G.S.; KERSTEN, I.O., inzhener,
retsensent; BUTAKOV, S.Ye., doktor tekhnicheskikh nauk, redaktor;
DUGINA, N.A., tekhnicheskiiy redaktor.

[Ventilators and pumps; methods of selecting and designing] Ven-
tilatory i nasosy; metod podbora i proektirovaniia. Moskva, Gos.
nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1955. 138 p. (MLRA 8:9)
(Fans, Mechanical) (Pumping machinery)

GLUSHKOV, Leonid Aleksandrovich; BATURIN, V.V., doktor tekhnicheskikh nauk, retsendent; BUTAKOV, S.Ye., professor doktor tekhnicheskikh nauk, redaktor; LUCHKO, Yu.V., redaktor izdatel'stva; KOVALENKO, N.I., tekhnicheskii redaktor

[Ventilation in crushing and grinding shops] Ventilatsiia drobil'no-razmol'nykh oddelenii. Sverdlovsk, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1956. 89 p. (MLRA 9:7)

(Factories--Heating and ventilation)
(Ore dressing)

BUTAKOV, S. Ye.

GLUSHKOV, Leonid Aleksandrovich; BUTAKOV, S.Ye., doktor tekhnicheskikh nauk, professor, retsenzent; ~~CHERNAVIN~~, S.P., redaktor; LUCHKO, Yu.V., redaktor izdatel'stva; ZEP, Ye.M., tekhnicheskii redaktor.

[Dust removal equipment for departments using crushers and grinders]
Obespylivanie oborudovaniia drobil'no-razmol'nykh otdelenii.
Sverdlovsk, Gos.nauchno-tekhn.isd-vo lit-ry po chernoii i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1957. 106 p. (MIRA 10:11)
(Dust--Removal)

BUTAKOV, Sergey Yefimovich; TALIYEV, V.N., kand.tekhn.nauk, retsenzent;
Kochnev, K.V., doktor tekhn.nauk, red.; DUGINA, H.A., tekhn.red.

[Air ducts and ventilators; aerodynamics of ventilator equipment]
Vozdukhoprovody i ventilatory; aerodinamika ventilatornykh
ustanovok. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry,
1958. 350 p. (MIRA 11:6)
(Ventilation)

KOCHNEV, Konstantin Vasil'yevich; BUTAKOV, S.Ye., otv.red.; MAKOVSKIY,
G.M., red.izd-va; ASTAF'YEVA, G.A., tekh.red.

[Temperature control in mines] Teplovoe konditsionirovanie
rudnichnogo vozdukha. Moskva, Izd-vo Akad.nauk SSSR, 1960.
133 p. (Akademia nauk SSSR. Ural'skii filial, Sverdlovsk.
Gorno-geologicheskii institut. Trudy, no.44) (MIRA 13:9)
(Mine ventilation)

BUTAKOV, S.Ye.

The coefficient of virtual viscosity in a turbulent flow in
pipes. Sbor.trud.NIIST no.9:158-165 '61. (MIRA 15:8)
(Turbulence) (Viscosity)

BUTAKOV, S.Ya., prof., doktor tekhn. nauk; KHVATOV, Yu.V., assistant

Using the reaction method in the investigation of ventilation
installations. Sbor. nauch. trud. Ural. politekh. inst.
no.122:268-274 '61. (MIRA 17:12)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury
SSSR.

BUTAKOV, Sergey Yefimovich; USPENSKIY, V.A., retsenzent; KRYZHOVA,
M.L., red. izd-va; MAL'KOVA, N.T., tekhn. red.

[Principles of the ventilation of hot metal-working plants]
Osnovy ventiliatsii goriachikh tsekhov. Sverdlovsk, Metal-
lurgizdat, 1962. 286 p. (MIRA 15:11)
(Rolling mills--Heating and ventilation)
(Metallurgical plants--Heating and ventilation)

GALIMZYANOV, F.G.; BUTAKOV, S.Ye., doktor tekhn. nauk, prof.,
retsenzent; PAL'SHIN, M.V., kand. tekhn. nauk, red.;
VASIL'YEVA, N.G., red.izd-va; DEMKINA, N.F., tekhn. red.

[Fans; atlas of designs] Ventilatory; atlas konstruksii.
Spravochnoe posobie. Moskva, Mashgiz, 1963. 143 p.
(Fans, Mechanical) (MIRA 16:12)

L 08489-67 EWP(m)/EWT(1)
ACC NR: AR6016462 (N) SOURCE CODE: UR/0124/65/000/012/B067/B067 34
AUTHOR: Butakov, S. Ye.; Stoler, V. Z. B
TITLE: Momentum of a circular turbulent jet in an efferent flow
SOURCE: Ref. zh. Mekhanika, Abs. 12B479
REF SOURCE: San. tekhn. Otopleniye i ventilyatsiya, vyp. 1, 1965, 88-92
TOPIC TAGS: turbulent jet, motion mechanics
ABSTRACT: The authors give data from an experimental determination of the momentum of a circular jet perpendicular to an efferent flow. The momentum was determined on a special installation by weighing the reaction force. Relationships are derived for the relative reaction of a screen (the ratio of screen reaction for a jet in an efferent flow to that for a submerged jet) as a function of the angle of inclination and relative velocity of the jet (the ratio between the velocities of the jet and efferent flow). A. S. Ginevskiy. [Translation of abstract]
SUB CODE: 20
ms
Card 1/1

Бутов Ков, В.

BUTAKOV, V.; MIKHALEVICH, P. (Gor'kiy).

████████████████████ Apartment houses built by a small group of workers. Gor. 1 sel'.
strof. no.11:22 N '57. (MIRA 11:1)
(Gorkiy--Apartment houses)

BUTAKOV, Ye. A.

"Use of digital computers for synthesis of threshold elements"

report submitted for the Intl. Symposium on Relay Systems and Finite Automata Theory (IFAC), Moscow, 24 Sep-2 Oct 1962.

BUTAKOV, Ye.A.; ZAKREVSKIY, A.D.

Minimization of the number of states of a switching circuit
using the "Ural" universal digital computer. Probl. pered.
inform. no. 11:66-76 '62. (MIRA 16:1)
(Electronic digital computers)
(Electric relays) (Switching theory)

ACCESSION NR: AR4035562

S/0271/64/000/003/B010/B010

SOURCE: Ref. zh. Avtomat., telemekh. i vy*chisl. tekhn. Av. t., Abs. 3B48

AUTHOR: Butakov, Ye. A.; Toropov, N. R.

TITLE: Synthesis of the schemes realizing combinatorial operators

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta, vy*p. 42, 1963, 44-55

TOPIC TAGS: Gray code counter, shift register, Gray code counter synthesizing, combinatorial operator

TRANSLATION: Based on the Boolean algebra, a synthesis of a Gray-code counter with a digit blocking and a synthesis of a generator of combinations of n things, k at a time, are presented. These devices can be used in a control system of a specialized computer for investigating communication and control systems. Two methods are analyzed in synthesizing the Gray-code counter. In the first method, the conventional binary positional counter is used for obtaining Gray-code numbers (by a definite algorithm). Owing to the drawbacks of the first method (lower counting rate and need for additional equipment when symmetrical outputs in each counter digit are realized), the second method is used in the synthesizing in

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ACCESSION NR: AR4035562

which the Gray-code natural numbers appear directly in the counter. A Gray-code counter synthesis with blocking any k digits is presented. A functional scheme of odd and even cells is given. An algorithm underlying the generator of combinations of n things, k at a time, is described. This algorithm is also illustrated by a table presenting all combinations of 6, three at a time. An optimum scheme for realizing the algorithm consisting of k shift registers is presented. A scheme of 2-cycle magnetic-core shift register is analyzed. Six illustrations, two tables. Bibliography: 5 titles.

DATE ACQ: 14Apr64

SUB CODE: DP

ENCL: 00

Card 2/2

ACCESSION NR: AP4015291

S/0280/64/000/001/0039/0049

AUTHOR: Butakov, Ye. A. (Tomsk); Zakrevskiy, A. D. (Tomsk)

TITLE: Some problems in realization of Boolean functions with threshold elements. Part I

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 1, 1964, 39-49

TOPIC TAGS: Boolean algebra, Boolean function, threshold element Boolean function, 10 variables Boolean function, logical design, Boolean function realization

ABSTRACT: A method of realizing a Boolean function with one threshold element is considered; the method is based on the possibility, in the case of a threshold function, of attaining linear ordering of the set of weights of variables. The problem is solved by the method of successive approximations. Since a decision is to be made in each step as to which weights are to be increased, the final

Card 1/2

BUTAKOV, Ye.A.

Realization of the Boolean function of n -variables by a set of n -input threshold elements. Probl. pered. inform. 1 no.1:41-51 '65. (MIRA 18:7)

L 04423-67 EWT(d)/EWP(1) IJP(c) BB/GG/GD

ACC NR: AT6014295

SOURCE CODE: UR/0000/65/000/000/0357/0362

AUTHOR: Kashirov, V. I. (SSSR); Butakov, Ye. A. (SSSR); Pottosin, Yu. V. (SSSR); Toropov, N. R. (SSSR); Tsvetnitskaya, S. A. (SSSR)

ORG: none

TITLE: Problems in materialization of the L-machine 16C

SOURCE: International Symposium on the Theory of Relay Systems and Finite Automata. Moscow, 1962. Sintez releynykh struktur (Synthesis of relay structures); trudy simpoziuma. Moscow, Izd-vo Nauka, 1965, 357-362

TOPIC TAGS: logic circuit, logic design, switching theory, digital computer

ABSTRACT: Structures of a cell of multioutput fields of the "L-machine" (see AT6014294), a combination generator, and a Gray-code counter of the machine's control unit are considered. The counter has ten binary elements whose states can be represented by a binary word $g = (g_{10}, g_9, \dots, g_1)$. A 10-digit binary word r determines the set of blocked digits in the word g , i.e., with $r_i = 0$,

Card 1/2

L 04423-67

ACC NR: AT6014295

$g_i = 0$. The generator of combinations of 10 things k at a time comprises 10 binary elements whose states can be described by a 10-digit binary word $c = (c_{10}, c_9, \dots, c_1)$. Under the influence of control pulses at the generator input, the word c will consecutively take on all values that correspond to all possible combinations of k ones and $10-k$ zeros. The field unit comprises one principal and 13 auxiliary fields. Each field comprises $2^{10} = 1024$ elements with numbers j , where $j = 0, 1, \dots, 1023$. Block diagrams of the above units are shown, and their operations are briefly described. Orig. art. has: 4 figures, 13 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: 27Aug65 / ORIG REF: 001

awm

Card 2/2

BUTAKOV, Ya., kand. sel'khoz. nauk; LODVIKOVA, A.S., red.; SAGITOVA, S.G.,
tekhn. red.

[Improvement of pastures and meadows] Uluchshenie senokosov i past-
bishch. Kazan', Tatarskoe knizhnoe izd-vo, 1960. 75 p.

(MIRA 14:9)

(Pastures and meadows)

BUTAKOV, V.G.; KOGAN, N.G.; SHVOYNITSKAYA, N.A., inzh. (Sverdlovsk)

Potentials for reducing the costs of snow control. Put' i put.
khoz. 9 no.12:8-9 '65. (MIRA 19:1)

1. Zamestitel' nachal'nika sluzhby puti Sverdlovskoy dorogi
(for Butakov). 2. Nachal'nik tekhnicheskogo otdela sluzhby
puti Sverdlovskoy dorogi (for Kogan).

CHISTYAKOVA, M.A.; BUTAKOVA, A.A.

Acupuncture and cauterization. Vrach.delo no.10:73-76 0 '60.

(MIRA 13:11)

1. Kabinet kitayskoy narodnoy meditsiny poliklinik No.1 i No.2

Chetvertogo upravleniya Ministerstva zdravookhraneniya USSR.

(ACUPUNCTURE)

(CAUTERY)

GORBACH, V.G.; BUTAKOVA, E.D.

Metallography of martensite transformation into austenite. Fiz.
met. i metalloved. 16 no.2:292-297 Ag '63. (MIRA 16:8)

1. Institut fiziki metallov AN SSSR.
(Iron-nickel alloys—Metallography)
(Phase rule and equilibrium)

L 23984-66

ACC NR: AP6004985

SOURCE CODE: UR/0406/65/001/001/0041/0051

AUTHOR: Butakov, Ye. A.

ORG: none

31
29
B

TITLE: Realization of the Boolean function of n variables by a network of threshold devices with n inputs

SOURCE: Problemy peredachi informatsii, v. 1, no. 1, 1965, 41-51

TOPIC TAGS: Boolean function, computer logic, mathematic analysis

ABSTRACT: The synthesis of a single-row network containing a minimum number of components may be solved exactly at least at $n < 6$. However, the computation requirements are extremely high. In this connection, the present author investigates an approximate method which makes it possible to realize the Boolean function by a threshold-device network. The method used is semi-intuitive and may be employed when the number of variables is not large. Its advantages are a small number of computations and the opportunity it provides to find a solution close to the optimum. The method may be sufficiently rigidly formalized, but then the number of computations rises.

Card 1/2

UDC: 519.95

2

L 23984-66

ACC NR: AP6004985

2

The method employs the properties of the visual acceptance of information, as a result of which the complex transformations of the Boolean function are easily executed mentally. The effectiveness of the method was checked experimentally against the data provided by R. C. Minnick (Linear-Input Logic. IRE Trans. Electronic Computers, 1961, 10, 1, 6-16). The results show that the number of elements needed for the realization of all types of functions of four variables in a single-row network is 33% higher than in the case of realization by networks with a more complex structure, and that in both cases the greatest number of types require two elements for their realization. Author expresses his gratitude to all the participants in the seminar which discussed the results given in this paper, particularly to V. N. Roginskiy and V. G. Lazarev, whose comments the author values highly. Orig. art. has: 1 table, 10 figures, and 6 formulas.

SUB CODE: 09, 12 / SUBM DATE: 24May64 / ORIG REF: 007 / OTH REF: 003

Card 2/2 *slw*

BUTAKOVA, YE. L.

PA 1/49T58

USSR/Geology
Petrology
Tectonics

Jan/Feb/Mar 48

"Small Intrusions of Granodiorite and Granodiorite-
Porphyry of Northeastern Mogol Tau," Ye. L. Butakova,
14 pp

"Zapiski V-S Mineral Obshch" Vol LXXVII, No 1

Gives geological and petrographic description of
intrusions, structure and form of intrusions,
conditions necessary for formation of small intru-
sions, conclusions regarding Chorukh-dayron deposits.

1/49T58

CA BUTAKOVA, Ye. L.

8

Alkaline rocks of the upper river Isfalam (Alai Range).
 E. L. Butakova. *Zapiski Vsesoyuz. Mineral. Obshchestva*
 (Mem. Soc. Russ. Mineral.) 79, 52-62 (1950). The Cañon
 of the river Isfalam (cf. Mo-kyin, *Trudy Petrograf. Inst.*
 No. 6 (1934); *C.A.* 30, 1332) opens a rich massive of
 intrusive rocks, especially a medium-grained amphibole-
 biotite granite, with pyroxene-bearing syenites, and alk.
 types. Chem. analyses are given, which show the alk.
 character, the enrichment of the alkali syenites near the
 contacts of the granite massive, and the differentiation
 cycle. In spite of that, the mineralogical character is not
 in a clear analogy with these facts: no alkali-amphibole
 was observed, the plagioclase is rich in Ca feldspar, and the
 granites are high in quartz. Therefore, it included a dis-
 cussion of the skarns on the roofs of the intrusive, and gives
 a systematic comparison with a similar rock series in the
 Cañon of rivers Rokslif and Tagovy-Sobak (cf. I. V.
 Nikitin, 1936: 37). The granite is, in both groups, an aplitic
 type, amphibole-biotite granite; it is, however, only ob-
 served in the massive of river Isfalam. Very similar
 are the syenitic rocks with transitions to nephelite syenites,
 even, and the deeper-seated pyroxene diorites and gabbro-
 diorites.
 W. Eitel

The Petrology of the Maymecha-Kotuyskiy Complex of Ultrabasic and Alkaline Rocks 15-1957-10-13911

relationship in a single tectonic cycle but not necessarily a genetic relationship. A sharp change in the essential composition of the rocks from the early phase of magmatic activity to the later is characteristic. The chemical composition of the rocks and the sequence and conditions of their formation lead one to assume that the original magma for the complex had a composition approaching that of lava at the beginning of a magmatic cycle; that is, ultrabasic rocks with high alkaline content are just melanocratic nepheline basalts. Differentiation of this magma produced separation into an ultrabasic, alkali-poor magma and a silica-rich magmatic residual poor in basic constituents, from which the young alkaline rocks of the region originated. A great constancy in the composition of olivine in all the ultrabasic and alkaline rocks of the region indicates the possibility of gravitational differentiation by means of crystal settling of olivine.

Card 2/5

The Petrology of the Maymecha-Kotuykiy Complex of Ultrabasic and Alkaline Rocks

15-1957-10-13911

Components	Table 2							
	1	2	3	4	5	6	7	8
SiO ₂	37.00	38.64	40.81	36.91	36.46	33.43	44.08	44.92
TiO ₂	0.5	1.45	2.64	1.05	1.39	1.37	1.74	2.4?
Al ₂ O ₃	14.57	10.78	12.28	0.53	2.08	12.7	25.78	16.14
Fe ₂ O ₃	9.24	6.99	6.35	7.75	7.92	4.03	2.27	5.0?
FeO	5.04	6.65	6.48	4.78	4.37	9.82	1.44	6.2?
MnO	0.17	0.15	0.12	0.05	none	0.17	0.09	0.10
MgO	6.54	14.20	8.71	35.30	33.08	14.93	2.38	3.49
CaO	16.02	12.47	13.36	2.99	1.82	10.57	6.53	7.80

Card 3/5

15-1957-10-13911

The Petrology of the Maymecha-Kotuyskiy Complex of Ultrabasic and Alkaline Rocks

Na ₂ O	2.85	3.13	4.08	tr.	tr.	2.03	10.70	.27
K ₂ O	1.45	0.49	0.91	tr.	tr.	2.61	3.34	3.35
P ₂ O ₅	0.87	0.49	0.45	0.07	0.10	0.56	0.41	0.65
CO ₂	--	--	--	1.46	1.2?	--	0.38	--
NiO ₂	--	--	tr.	0.32	0.26	--	--	--
Cr ₂ O ₃	none	0.08	0.06	0.24	0.34	tr.	--	tr.
H ₂ O ₊ 110°	--	--	--	6.61	11.41	--	--	--
H ₂ O ₋ 110°	0.86	--	--	--	--	--	--	--
S	--	--	--	--	--	0.04	0.02	--

Card 4/5

The Petrology of the Maymecha-Kotuykiy Complex of Ultrabasic and Alkaline Rocks 15-1957-10-13911

SO ₃	--	--	--	--	tr.	--	--	--
Cl	--	0.004	--	--	--	0.001	0.15	--
F	--	--	--	--	--	--	0.08	--
others	5.79	4.46	3.14	--	--	1.90	1.03	4.19
Total	100.45	99.98	99.39	100.06	100.50	100.18	100.42	99.63

1) Altered melanocratic nepheline basalt, Kotuy River below the mouth of the Tarrynag River; 2) altered melanocratic nepheline dolerite, same locality; 3) kotuite, valley of the Kotuy River below the mouth of the Ekhelekh River; 4) volcanic meimechite, valley of the Gulya River; 5) meimechite tuff, bank of the Maymecha River; 6) Khatangite, same locality; 7) urtite-ijolite, same locality; 8) milignite (Tr--malignite?), upper reaches of the Selyanda River.

Card 5/5

B. I. Omel'yanenko

BUTAKOVA, Ye. L.

TEACHENKO, B.V.; RABKIN, M.I.; DEMOKIDOV, K.K.; VAKAR, V.A.; GROZDILOV, A.L.;
BUTAKOVA, Ye.L.; STREIKOV, S.A.

Geology of the northern part of the Central Siberian Plateau.
Trudy Nauch.-issl. inst. geol. Arkt. 81:133-242 '57. (MIRA 11:5)

1. Sotrudniki instituta geologii Arktiki.
(Central Siberian Plateau--Geology)

BUTAKOVA, Ye.L.

Tectonic conditions controlling the formation of the alkali and ultrabasic complex in the northern Siberian Platform. Geol. i geofiz. no.1:34-44 '61. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut, Leningrad.

(Siberian Platform—Geology, Structural)

BUTAKOVA, Ye.L.

Dugdu alkali intrusion (eastern Tuva). Trudy VSEGEI 98:
15-31 '63. (MIRA 17:5)

BUTAKOVA, Ye.I.

Tectonic conditions governing the formation of alkali rocks in
eastern Tava. Geol. i geofiz. no.5:19-34 '65.

(MIRA 18:8)

I. Yuzovyy nauchno-issledovatel'skiy geologicheskii institut,
Leningrad.

PHASE I BOOK EXPLOITATION SOV/3995

Butalov, Leonid Vladimirovich, Candidate of Technical Sciences, and
Yuriy Aleksandrovich Filin, Engineer.

Opyt osvoeniya tekhnologii izgotovleniya fasonnykh otlivok iz titana
(Experience in Mastering the Technique of Making Shaped Titanium
Alloy Castings) Leningrad, 1959. 17 p. (Series: Leningradskiy
dom nauchno-tekhnicheskoy propagandy. Obmen peredovym opytom.
Seriya: Liteynoye proizvodstvo, vyp. 5) 6,500 copies printed.

Sponsoring Agencies: Leningradskiy dom nauchno-tekhnicheskoy pro-
pagandy; Obshchestvo po rasprostraneniyu politicheskikh i nauch-
nykh znaniy RSFSR; Nauchno-tekhnicheskoye obshchestvo mashino-
stroitel'noy promyshlennosti; Leningradskoye oblastnoye otdeleniye.
Sektziya liteynogo proizvodstva.

Ed.: I.M. Slitskaya; Tech. Ed.: V.L. Gvirtz.

PURPOSE: This booklet is intended for personnel in foundries.

COVERAGE: This booklet, the fifth of a series on casting published
by the RSFSR Society for the Propagation of Political and Scientific
Card 1/3

Experience in Mastering (Cont.)

SOV/3995

Knowledge, deals with the technique of producing shaped titanium-alloy castings. The authors discuss briefly the most promising furnace used for melting titanium, the most suitable mold materials of which chill molds for titanium casting are made, the casting properties of titanium, and the structure and properties of shaped titanium castings. No personalities are mentioned. There are 6 references: 4 Soviet and 2 English.

TABLE OF CONTENTS:

There is no table of contents; the booklet is divided into the following sections:

Introduction	3
Melting Furnaces and Reduction	4
Molding Materials	9
Casting Properties of Titanium	14
Card 2/3	

KONDRAT'YEV, Yuriy Petrovich; BUTALOV, L.V., nauchnyy red.; OZEROVA,
Z.V., red.; TSAL, R.K., tekhn.rad.

[Design of cast parts for precision casting equipment] Konstrui-
rovanie litykh detalei i osnastiki dlia lit'ia po vyplavliaemym
modeliam. Leningrad, Gos.soiuznoe izd-vo sudostroit.promyshl..
1960. 198 p. (MIRA 13:7)
(Precision casting--Equipment and supplies)
(Machinery--Design)

Butalov, L. V.

PHASE I BOOK EXHIBIT/DOR 50V/A199
Leningrad, Politechnicheskoy Institut

Kovremennyye dostizheniya litseynogo protivodetviya, tverdyye
azhurovskoy nauchno-tekhnicheskoy konferentsii (Recent
Achievements in Founding: Transactions of the Scientific
and Technical Conference of Schools of Higher Education)
Moscow, Mashgiz, 1950. 330 p. Extra slip inserted.
4,000 copies printed.

Resp. Eds.: Yu. A. Nekhendzi, Doctor of Technical Sciences,
Professor; Eds.: N. G. Girshovich, Doctor of Technical
Sciences, Professor, and K. P. Lebedev, Doctor; Managing
Ed. for Literature on Heavy Machine Building (Leningrad
Department, Mashgiz): Ye. P. Nemov, Engineer; Tech. Eds.:
Ye. A. Dugobanskaya, and I. V. Shtetlman.

PURPOSE: This book is intended for the technical personnel
of foundries. It may be used by students of the field.

COMMENT: This collection of articles discusses problems in
founding processes. Individual articles treat the melting
of metals and their alloys, mechanization and automation
of casting processes, aspects of the manufacture of steel,
cast iron, and nonferrous metal and their alloys. No personalities
are mentioned. References accompany individual articles.

Recent Achievements in Founding (cont.) 50V/A199

- 44. Korotkov, V. O. Degassing of Aluminum Alloys by a Direct
Current 314
 - 45. Poblezhkiy, G. M. Design of Gating Systems for Nonferrous
Alloy Castings 321
 - 46. Butalov, L. V., Yu. A. Nekhendzi, and Yu. A. Piliin.
Mechanization and Automation of Alloy Shaped Castings 326
 - 47. Januy, A. A. Utilization of Solid Carbonic Acid in
Molding Nonferrous Metal Castings 332
- VIK/sem/mc. VK/dem/mc.

Beitakov, L.V.

TABLE I BOOK EXPLANATION SIV/ASA

Abdelyaev, S.M. *Katalizy po tsillo-bimolicheskim osnovam protivodavnykh stali*
 Prikladnyye voprosy metallurgii (Use of Vacuum in Metallurgy) Moscow, Izdatro
 II SSBK, 1960. 334 p. Error slip inserted. 4,500 copies printed.

Sponsoring Agency: Abdelyaev, S.M. Institut metallurgii (Inst. A.S. Baykova,
 Katalizy po tsillo-bimolicheskim osnovam protivodavnykh stali.

Beep, K.I. A.M. Samarin, Corresponding Member, Academy of Sciences USSR; K.I. of
 Publishing House: G.M. Makovskiy, Techn. Sci. S.S. Makovskiy.

PURPOSE: This collection of articles is intended for technical personnel interest-
 ed in present studies and developments of vacuum steelmaking practices and equip-
 ment.

CONTRACT: The book contains information on steel making in vacuum induction fur-
 naces, and vacuum arc furnaces, reduction processes in vacuum, and charging of
 steel and alloys. The functioning of apparatus and equipment, particularly
 vacuum furnaces and vacuum booster pumps is also analyzed. Formulas are
 mentioned in connection with some of the data and will appear in the table
 of contents. These articles have been translated from English. Some of the
 authors: K.I. Beep, K.I. Samarin, P. G. Solov'ev, V.I. Kabanov, V.A. Anshin,
 V.I. Solov'ev, V.I. Kabanov, V.I. Kabanov, V.I. Kabanov, V.I. Kabanov, V.I. Kabanov,
 A.P. Solov'ev and V.I. Kabanov participated in the work.

Robbins, T.H., and H.T. Beckwith, Casting of Cold-Chamber-Forging Alloys
 in the Protective Atmosphere Under Vacuum 20

Kabanov, V.I., L.P. Solov'ev, P.I. Beep, and V.I. Kabanov. The Effect of
 Melting and Casting in Vacuum and in Protective Atmosphere on the Properties
 of Titanium Castings 39

Ilshverakiy, B.Y., and A.M. Samarin. Vacuum Melting of Stainless Steel 45

Philippovskiy, M.M. The Effect of Vacuum Melting on the Quality of 18/8/8V
 Steel 60

PART II. MELTING OF STEEL AND ALLOYS IN VACUUM AND PURPOSSES

Shroyer, A.B., O.Z. Podolskiy, A.M. Yumov, and B.T. Fedin. Melting of Ba-
 Aluminide Metals in Vacuum Arc Furnaces 65

Bolshoy, A.B., D.I. Lashin, A.A. Tsvetkov, and A.S. Shveta. Investigation of
 the Properties of Ball-Bearing Steel Remelted in a Vacuum Arc Furnace 72

Johansen, S.V. Vacuum Arc Melting 76

Polin, L.V., and E.I. Sembrizkiy. Melting of Stainless Steel in Vacuum
 Arc Furnaces 79

Albert, M. Properties of Alloys Melted in Vacuum 88

Sokolov, P. Ya. Production of Low-Carbon Ferronickels by Blowing Under
 Vacuum 95

PART III. REDUCTION PROCESSES IN VACUUM

Gol'd, P.Y., and G.P. Shvetskiy. Kinetics of the Reduction of Silicon
 Remelted by Carbon in Vacuum 101

Meyerson, G.L. Vacuum-Thermic Reduction of Oxides of the Refractory Metals
 by Carbon (O.Ye. Kravtsov, G.Ye. Sazonov, Ye. M. Ippov, G.L. Zverev, and
 others of the Department of Metallurgy of Rare Metals of the Moscow
 Institute of Steel and Alloy (Moscow Institute of Non-Ferrous Metals
 and Gold) conducted investigations on which this article is based) 115

Chuk, G. (Polish People's Republic, Institute of Iron Metallurgy in
 Gliwice) Desulfurization of Ferronickels in Vacuum 124

Butalov, L.V.

PHASE I BOOK EXPLOITATION

SOV/4573

Moroz, Lev Solomonovich, Doctor of Technical Sciences, Professor; Boris Borisovich Chechulin, Ivan Vasil'yevich Polin, Leonid Vladimirovich Butalov, Saveliy Moiseyevich Shul'kin, and Aleksandr Petrovich Goryachev

Titan i yego splavy, tom 1: Tekhnicheski chisty ty titan (Titanium and Its Alloys, Vol. 1: Commercially Pure Titanium) Leningrad, Sudpromgiz, 1960. 515 p. Errata slip inserted. 4,200 copies printed.

Ed. (Title page): L.S. Moroz; Ed. (Inside book): Z.V. Vlasova; Tech. Ed.: N.V. Erastova.

PURPOSE: This book is intended for scientific workers, plant engineers, and students in advanced courses in schools of higher technical education and tekhnikums. It may also be used as a manual for designers and industrial engineers (with the exception of mechanical engineers).

COVERAGE: The book presents data on the structure, phase transformation, and physicochemical and processing properties of commercially pure titanium.

Card ~~1/6~~

Titanium and Its Alloys (Cont.)

SOV/4573

Shape-casting, vacuum metallurgy, plastic deformation, welding, and soldering and brazing processes for titanium are discussed. Special attention is given to problems of constructional strength and to titanium reduction processes.

L.S. Moroz wrote section 1 of Chapter 1, Chapter 2, and sections 1, 4, and 6 of Chapter 3. B.B. Chechulin wrote sections 2-6 of Chapter 1, sections 2, 3, and 5 of Chapter 3, and Chapters 4 and 9. I.V. Polin wrote Chapter 5; L.V. Butalov, Chapter 6; S.M. Shul'kin, Chapter 7; and A.P. Goryachev, Chapter 8. The authors thank A.V. Smirnov for his advice, and I.A. Bytenskiy for assistance in editing the manuscript. References accompany each chapter.

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1. Atomic and crystalline structure	5
2. Optical properties	12
3. Electronic properties	15
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Card 2/6

Titanium and Its Alloys (Cont.)

SOV/4573

Ch. 6. Shape-Casting	309
1. Melting furnaces and melting	310
2. Molding materials and making of molds	317
3. Casting properties of titanium and characteristic features of producing shaped castings	326
4. Properties and the uses of titanium castings	334
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Ch. 7. Pressworking of Titanium	339
1. Heating of ingots and blanks	339
2. Mechanical properties of titanium at high temperatures	340
3. Effect of hot pressworking on the structure and mechanical properties of titanium	355
4. Forging of ingots	360
5. Direct rolling of round ingots into sheet	362
6. Manufacture of pipe	372
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8. Manufacture of wire	385
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10. Hot die forging	391

Card 5/6

20516

18.1285

1808.1045.1454

S/128/60/000/003/001/007
A105/A133

AUTHORS: Nekhendzi, Yu. A.; Butalov, L. V.; Perov, N. I., and Filin, Yu. A.

TITLE: Casting properties of low-alloyed titanium

PERIODICAL: Liteynoye proizvodstvo, no. 3, 1960, 2-4.

TEXT: Investigations showed some chemical changes of titanium at temperatures of 1,000°C causing a deterioration of the mechanical properties. New processes are being employed in the production of argon shielded arc welded bars, pipes and various rolled goods of titanium and its alloys. Intricate casts, free from casting defects have been achieved lately. High melting temperatures (1,725°) and a low heat conductivity (0.04 cal/cm sec°C) affect the hardening time and fluidity of titanium. The casting properties of titanium melted in induction furnaces, containing 0.8 - 1.0% carbon, have been tested by the Chikel' test (Chikel', I. - Ref. 1: "Liteynoye proizvodstvo", no. 1, 1959). The testing device consists of a 25 mm thick disk with vertical channels 1 - 10 mm in diameter. The filling-up conditions of the vertical channels are analogous to the filling up of vertical sections of

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A105/A133

Casting properties of low-alloyed titanium

thinwalled casts. All channels more than 6 - 7 mm in diameter were filled up to full height. At 1,850°C the vertical channels of 10 mm in diameter fill up to the full height, 5 - 6 mm diameter channels fill up to half their height. The temperature effect on the fluidity of 1% carbon titanium is shown in Figure 2. The best filling of forms is achieved with vacuum smelting and pouring. Figure 3 shows that, the overheat being the same, the fluidity of titanium and steel are close. Channels of smaller diameter fill up better with steel because of a less intensive heat transfer; wider channels fill up better with titanium than with steel due to the low heat conductivity of titanium. The linear shrinkage of titanium is similar to that of steel; therefore patterns for steel casting may be used for titanium casting. The smelting method and gas content of the metal affect the quantity and location of blowholes. Vacuum smelted titanium does not show more blowholes than steel. At identical smelting conditions the structure of titanium casts is finer. Figure 4 shows dependence of primary crystals on the cross section of castings and overheating temperature. Higher temperatures increase the grain size. Titanium hardens faster than steel; therefore the filling of molds has to be accomplished faster to reduce the time of interaction of titanium

Cond 2/5

20516

S/128/60/000/003/001/007
A105/A133

casting properties of low-alloyed titanium

and gas-phase. The elimination of blowholes may be achieved by degassing during the smelting or by filling the furnace with inert gas producing a lower pressure. Both systems secure good casts. In contrast to steel, titanium moistens the walls of ceramic molds forming over the meniscus thin, solidifying metal "tongues" affecting the origination of a thin crust. The right position of the mold is of great importance during the pouring; a minimum of horizontal surfaces should be ensured. There are 7 figures and 3 Soviet-bloc references.

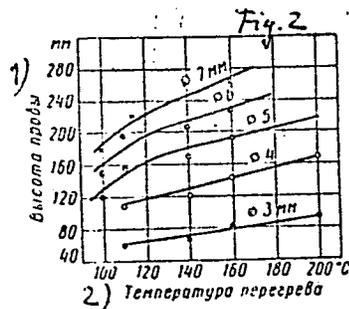


Figure 2:

- (1) height of specimen;
- (2) overheating temperature.

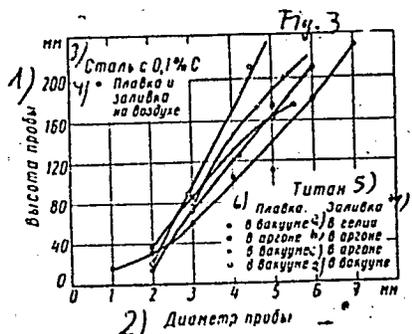
Card 3/5

20516

S/128/60/000/003/001/007
A105/A133

Casting properties of low-alloyed titanium

Figure 3:



- (1) height of specimen;
- (2) specimen diameter;
- (3) steel with 0.1% C;
- (4) smelting and pouring in the air;
- (5) vapor;
- (6) smelting: a) in vacuum, b) in argon, c) in vacuum, d) in vacuum;
- (7) pouring: a) in helium, b) in argon, c) in argon, d) in vacuum.

Card 4/5

20516

casting properties of low-alloyed titanium

S/128/60/000/003/001/007
A105/A133

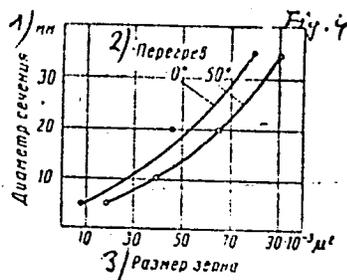


Figure 4:

- (1) cross-section diameter;
- (2) overheating;
- (3) grain size.

✓

Card. 5/5

1.1500

СИР41
S/598/61/000/006/032/034
D217/D303

AUTHORS: Nekhendzi, Yu.A., Butalov, L.V., Perov, N.I., and
Filin, Yu.A.

TITLE: Casting properties of low-alloyed titanium and
mechanical properties of castings made in this
material

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Titan i
yego slavy. no. 6, 1961. Metallotermiya i elektro-
khimiya titana, 240 - 250

TEXT: The casting properties of Ti, containing 0.8 - 1.0 % C, melted in the graphite crucible of an induction furnace, were investigated. In order to determine the dependence of fluidity on various factors, Chikel's probe was used; this consists of a stand and disc with vertical channels of various diameters made in it along its circumference. The influence of superheating temperature (difference between casting temperature and melting point of Ti) and atmosphere on the fluidity of Ti was investigated and the mechani-

Card 1/2

31041

S/598/61/000/006/032/034

Casting properties of low-alloyed ...

D217/D303

cal properties of Ti castings and their microstructures were studied. Some aspects of the manufacture of, and defects encountered in, Ti castings are discussed. It is concluded that the mechanical and casting properties of Ti are close to those of special steel and enable completely satisfactory castings of considerable complexity to be obtained, in spite of some difficulties encountered. There are 10 figures, 1 table and 4 references; 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: Van Thyne and H.B. Kessler, J. Metals, USA. 1954, 6/2, 193. X

Card 2/2

BUTALOV, Vladimir Aleksandrovich; BUTALOV, Leonid Vladimirovich;
PIKUNOV, M.V., kand. tekhn. nauk

[Production and casting of nonferrous metal alloys] Pro-
izvodstvo i lit'e splavov tsvetnykh metallov. Moskva,
Izd-vo "Metallurgiya," 1964. 137 p. (MIRA 17:8)

GULYAYEV, B.B.; MAGNITSKIY, O.N.; DEMIDOVA, A.A.; Primali
uchastiye: KAPLUNOVSKIY, G.A.; KUKKONEN, E.Ya.; BUTALOV,
L.V., kand. tekhn. nauk, retsenzent

[Castings of high-melting metals] Lit'e iz mugoplavkikh me-
tallov. Moskva, Izd-vo "Mashinostroenie," 1964. 291 p.
(MIRA 17:5)

L 10180-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP5026560 SOURCE CODE: UR/0286/65/000/019/0117/0117

INVENTOR: Shneyder, Yu. G.; Butalov, L. V. 44
B
44,55 44,55

ORG: none

TITLE: Method of manufacturing aluminum mirrors. Class 48, No. 175365
44,55 27

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 117

TOPIC TAGS: aluminum, mirror, *plastic deformation*

ABSTRACT: This Author Certificate introduces a method of manufacturing aluminum mirrors by plastic deformation. To obtain high reflectivity in the mirror, the mirror blank is first surface rolled with a ball at least 100 mm in diameter at a feed of 0.003—0.005 mm, and then electropolished. [ND]

SUB CODE: 11, 13/ SUBM DATE: 06Dec62/ ATD PRESS: *4152*

Card *00* 1/1 UDC: 621.357.66
621.923.77

ACCESSION NR: AP4042592

S/0056/64/046/006/2245/2247

AUTHORS: But'alov, M. M.; Komarov, V. I.; Savchenko, O. V.

TITLE: Isotropic discharge chamber for the registration of relativistic charged particle tracks

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 2245-2247

TOPIC TAGS: relativistic particle, spark discharge chamber, particle detector, cosmic ray particle, ionization chamber, electron multiplier

ABSTRACT: With an aim at eliminating some of the deficiencies of spark chambers (anisotropy for particles with trajectories inclined to the field direction, difficulty of observing stopped charged particles, lack of discrimination of charged particles with different ionizing abilities), the authors describe an isotropic discharge chamber which yields, under conditions of local multiplication of

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ACCESSION NR: AP4042592

the primary electrons, clear tracks of charged particles with ionizing ability near minimum. The chamber is a plane-parallel capacitor with brass electrodes. Scintillation counters connected for coincidence select cosmic rays passing through the working volume in approximately vertical direction. The incident cosmic ray produces local electron multiplication and the resultant weak light along the particle trajectory is focused onto the cathode of an image amplifier. The track image is photographed. The apparatus can be adapted for use in experiments with elementary particles. "The authors thank L. M. Soroko for constant help in the work and for a discussion of the results." Orig. art. has: 2 figures.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy
(Joint Institute of Nuclear Research)

SUBMITTED: 03Apr64

ENCL: 01

SUB CODE: NP

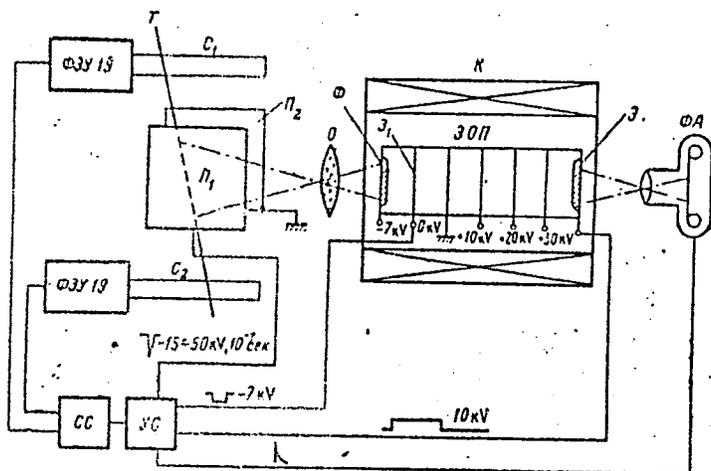
NR REF SOV: 004

OTHER: 002

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ACCESSION NR: AP4042592

ENCLOSURE: 01



- Π - chamber electrodes
- C - scintillation counter
- ΦЭУ - photomultiplier
- CC - coincidence circuit
- CY - control circuit
- O - objective
- ЭОП-19 - electron-optical converter
- Φ - photocathode
- Э₁ - screen of first stage of el. opt. conv.
- Э - output screen of el. opt. conv.
- K - focusing coil
- ΦА - photo camera
- T - cosmic-particle trajectory

General diagram of isotropic discharge chamber

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1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX

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M

Tin-Free Bronzes and Their Introduction in the Factories of the NKPS.
 V. A. Butalov (*Vestn. Inzhn. Tekhn.*, 1941, 40-45; *Chem. Zentr.*, 1941, 112, (1), 668; *C.A.B.*, 1943, 37, 4673).--[In Russian.] A survey of various tin-free bronzes and their properties, which are to be used as substitutes for tin and aluminium bronzes. The characteristics of these alloys are excellent, as their mechanical properties are 2-3 times as high, and the corrosion-resistance at high temperature is also very good. The purity of the raw materials is very important, e.g., 99-99% electrolytic copper is used, and pure manganese metal instead of iron-manganese alloy. Two new aluminium bronzes are described: AZhN 10-4-4 and AZhN 11-6-6, with aluminium 10 or 11, nickel 4 or 6, and iron 4 or 6%. The properties of these alloys are tabulated.

458-55A METALLURGICAL LITERATURE CLASSIFICATION

GROUPS MATERIALS SECTIONS COLLECTIONS REVISIONS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

BUTALOV, V.A.; ANDREYEV, V.M., professor, retsenzent; NESSEL'SHTRAUS, G.Z.,
prof., kandidat tekhnicheskikh nauk; VIDULYA, P.N., prof., doktor tekhnicheskikh nauk, redaktor; YELINSON, I.B. [deceased], inzhener, redaktor; KRASAVTSEV, N.I., kandidat tekhnicheskikh nauk, dotsent, redaktor; MI-LANOV, O.V., inzhener, redaktor; MIRKIN, I.L., prof., doktor tekhnicheskikh nauk, redaktor; RUKAVISHNIKOV, B.S., inzhener, redaktor; SLAVKIN, V.S., inzhener, redaktor; LEBEDEV, A.I., redaktor; MIKHAYLOVA, V.V., tekhnicheskiiy redaktor.

[Technology of metals] Tekhnologiya metallov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1952. 471 p.
[Microfilm] (MLRA 7:12)
(Metals)

BUTALOV, V.A.

[Prevention of defective work in foundry production] Bor'ba s brakom v litei-
nom proizvodstve. Leningrad, Gos.nauchno-tekhn. izd-vo mashinostroit. lit-ry
[Leningradskoe otd-nie] 1953. 197 p. (MLRA 6:12)
(Founding)

BUTALOV, V. A.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 313 - I

BOOK

Call No.: TN690.B94 1953

Author: BUTALOV, V. A.

Full Title: TECHNOLOGY OF METALS, 2nd ed.

Transliterated Title: Tekhnologiya metallov

Publishing Data

Originating Agency: None

Publishing House: State Scientific and Technical Publishing House for
Literature in Ferrous and Nonferrous Metallurgy

Date: 1953 No. pp.: 472 No. of copies: 30,000

Editorial Staff

Editors: Bidulya, P. N., Professor, Tech. Ed.: None

Doctor of Tech. Sci. (Ch. III);

Yelinson, I. B., Engineer (Ch. I, Sect. 2);

Krasavtsev, N. I., Kandidat Tech. Sci.,

Dotsent (Ch. I, Sect. I); Milanov, O. V.,

Engineer (Ch. IV and VI); Mirkin, I. L.,

Professor, Doctor of Tech. Sci. (Ch. II);

Rukavishnikov, B. S., Engineer (Ch. I, Sect. 3);

Slavkin, V. S., Engineer (Ch. V)

Editor-in-Chief: None

Appraisers: Andreyev, V. M.,

Professor;

Nessel'shtraus, G. Z.,

Professor, Kand. Tech.

Sci.

1/5

Tekhnologiya metallov

AID 313 - I

Text Data

Coverage: This is a comprehensive textbook on all phases of metallurgy and of metallography where theoretical and practical problems of the technology of production and working of metals are outlined, namely, the production of pig and of cast iron, steel, copper, aluminum, the principles of metallography, casting, welding, and working with tools and under pressure.

The book is very well written and gives an outline of the latest known technical knowledge on metals. It is of special interest in so far as it gives quite extensive information and data on Soviet standards concerning different kinds of steel and alloys.

TABLE OF CONTENTS		PAGE
Introduction		9-10
Ch. I Metallurgy		11-68
Sect. 1. Production of pig iron		11-29
	Raw materials; construction of a blast furnace; blast furnace process; blast furnace products.	
Sect. 2. Production of steel		29-46
	Production of steel in converters, in open	
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Tekhnologiya metallov

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hearth furnaces, in electric furnaces;
casting of steel.

Sect. 3. Production of nonferrous metals

47-68

Classification and use of nonferrous metals.

Ch. II Principles of Metallography

69-238

General characteristics of metals and alloys;
Physico-mechanical and technological properties
of metals and alloys; mechanical testing of metals;
structure of metals and alloys; processes of
crystallization of metals and alloys; thermal
analysis, plotting of cooling curves and of
equilibrium diagrams for alloys; steels and cast
irons; principles of thermal working of steel;
other kinds of structural changes in steel;
chemical-thermal working of steel; special kinds
of steel (alloy steels) (190-210) (with tables
and specifications according to All-Union State
Standards. GOST); specially hard alloys; powder
metallurgy; commercial nonferrous metals and
alloys; testing of the content of alloys; corro-
sion of metals and alloys; substitution of metals
and alloys by plastics.

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Tekhnologiya metallov

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	PAGE
Ch. III Casting Technology of casting forms; operation of forming; cast-iron casting; special methods in casting; defects in casts and their prevention; rules for the construction of models; calculation of the forming and casting surfaces.	239-299
Ch. IV Welding and Cutting of Metals Welding of metals and its importance; the nature of welding and classification of its types; electric arc welding; electric arc metal cutting; gas welding; gas metal cutting; gas flame working of metals; the Stakhanovite practice.	300-340
Ch. V Metal Working by Compression Processes General informatipn; rolling mills and auxiliary equipment; the principal characteristics of longitudinal, lateral and bending rolling; drawing and machinery for drawing; forging and hot stamping; cold metal working by compression; pressing of tubes and rods from nonferrous metals and alloys; kinds of rolled, forged, stamped and drawn articles; defects in articles produced by	341-392

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Tekhnologiya metallov

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working with compression; organization of work
in shops for hot metal working by compression.

Ch. VI Metal Machining by Cutting Processes 394-471

General information about cutting; processes of
metal cutting; metal cutting machinery; turning-
type lathes; drilling-type lathes; milling lathes;
slotting and planing lathes; grinding lathes;
machining hard metals (with soft tools); safety
measures in work on metal-cutting lathes; lock-
smith's work.

Purpose: Approved by the Board of Educational Institutions of the
Ministry of Ferrous Metallurgy as a textbook for technical
colleges.

Facilities: Many Russian scientists in the field of metallurgy are
mentioned.

No. of Russian and Slavic References: 9 (1941-1951)

Available: Library of Congress.

5/5

BUTALOV, V. A.

The Committee on Stalin Prizes (of the Council of Ministers) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-23, 20 Feb - 3 Apr 1953)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Butalov, V.A.	"Technology of Metals" (textbook) "Substitutes for Non-ferrous Metals and Alloys" "Control of Flaws in Foundry Practice"	Leningrad Mining Institute

Doc W-30604, 7 July 1954

BUTALOV, V.A.

~~BUZALOV, V.A.~~ SOKOLOV, A.N., kandidat tekhnicheskikh nauk, retsenzent;
TKACHEV, K.I., inzhener, redaktor; PETERSON, M.M., tekhnicheskii
redaktor

[Substitutes for metals and alloys in short supply] Zameniteli
defitsitnykh metallov i splavov. Izd. 2-e, dop. i perer. Moskva,
Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1955. 236 p.
[Microfilm] (MLRA 8:3)
(Metals, Substitutes for)

AUTHOR: Butalov, V.A.

122-1-34/34

TITLE: "Substitutes for metals and alloys in short supply" (Zam-
eniteli defitsitnykh metallov i splavov), Lenmashgiz,
1955, 240 pages. (Review)

PERIODICAL: "Vestnik Mashinostroyeniya" (Engineering Journal),
1957, No. 1, pp. 89-92 (U.S.S.R.)

ABSTRACT: Unfavourable review by Krylov, V.I., Engineer.

AVAILABLE: Library of Congress

Card 1/1

25(1)

PHASE I BOOK EXPLOITATION SOV/2232

Butalov, Vladimir Aleksandrovich

Model'shchik; spravochnoye posobiye (The Patternmaker; a Manual)
Moscow, Mashgiz, 1959. 300 p. Errata slip inserted. 20,000 copies
printed.

Reviewer: M.I. Varshavskiy, Engineer (Deceased) Ed.: A.N. Sokolov,
Candidate of Technical Sciences, Docent; Ed. of Publishing House:
A.I. Varkovetskaya; Tech. Ed.: L.V. Shchetinina; Managing Ed.
for Literature on the Technology of Machine Building (Leningrad
Division, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This book is intended for patternmakers with industrial
experience.

COVERAGE: The author presents basic information on metals, foundry
work, materials for wooden patterns, and methods of woodworking,
as well as the fundamentals of patternmaking. The book gives
suggestions for organizing pattern production and safety meas-
ures. The appendix consists of mathematical formulas and ex-

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The Patternmaker; a Manual

SOV/2232

amples of basic pattern designs. No personalities are mentioned.
There are 8 references, all Soviet.

TABLE OF CONTENTS:

Preface	3
Ch. I. General Information on Casting	5
1. Properties of metals and casting alloys	5
2. Casting methods	8
3. Allowances for machining and tolerances for dimensions and weight of castings	35
4. Vents, coremarks and core clearances	48
5. Dimensions of gate systems, risers, and sprues	54
6. Chills	64
Ch. II. Material and Specifications for Wood Patterns	67
7. Wood defects and their effect on the pattern quality	78

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The Patternmaker; A Manual	SOV/2232	
8. Natural and artificial drying of wood		80
Ch. III. Woodworking Methods		97
9. Working place, and patternmakers tools		97
10. Tools for manual cutting, sawing, planing, drilling and chiseling		105
11. Finishing wood pattern surfaces		122
12. Gluing wood		125
13. Power and pneumatic woodworking tools		133
14. Tool-sharpening devices and benches		150
15. Mechanical woodworking		153
Ch. IV. Basic Information on Preparing the Pattern		192
16. Types of wood joints		193
17. Detachable joints and bracings for core boxes		202
18. Types of pattern blanks		212
19. Standard blank dimensions		221
20. Classification of patterns		235
21. Design of individual pattern elements		241

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The Patternmaker; a Manual	SOV/2232	
22. Tools for marking patterns and boxes		247
23. Examples of pattern preparation		247
24. Painting and lacquering patterns		263
Ch. V. Organizing Work in Patterns Shops		268
25. Engineering and management measures		268
26. Labor protection and safety measures		274
Appendixes		278
Bibliography		298
AVAILABLE: Library of Congress		
Card 4/4		GO/ec 10-7-59

18(0);25(0)

PHASE I BOOK EXPLOITATION

SOV/3014

Butalov, Vladimir Aleksandrovich

Tekhnologiya metallov (Production and Processing of Metals) 2nd ed., rev. and enl. Moscow, Metallurgizdat, 1959. 502 p. Errata slip inserted. 31,500 copies printed.

Ed.: N.M. Glikin; Ed. of Publishing House: Ye. I. Levit; Tech. Ed.: P.G. Islent'yeva.

PURPOSE: This book is intended for those interested in the production and processing of metals. It may also be used as a textbook for students of tekhnikums and for workers studying to improve their skill.

COVERAGE: This book deals with the production and processing of metals. Such operations as foundry work, heat treatment, welding, forging, stamping, and metal cutting are treated in detail. Descriptions of the processes and types of equipment used in the production and processing of cast iron, steel, copper, and aluminum are given. The fundamentals of physical metallurgy are presented. Illustrative

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Production and Processing of Metals

SOV/3014

drawings and diagrams are included. Review questions accompany each chapter. The Introduction contains a brief review of the development of the Soviet metallurgical industry. The following persons, scientists in the field of metallurgy, are mentioned: A.A. Baykov, M.A. Pavlov, I.P. Bardin, and A.A. Bochvar. There are 8 references, all Soviet.

TABLE OF CONTENTS:

Introduction	3
Ch. I. Metallurgy	
I. Manufacture of pig iron	5
1. Raw materials	5
Most important iron ores	5
Preparation of ores for smelting	6
Fuel	7
Fluxes and their purpose	8
2. Structure of the blast furnace	8
Sections and dimensions of the blast furnace	8
Refractories used in blast-furnace building	11
Auxiliary operations	11
3. Blast-furnace process	13
Card 2/18	

BUTALOV, Vladimir Aleksandrovich; LEVIT, Ye.I., red. izd-va;
ATTOPOVICH, M.K., tekhn. red.

[Technology of metals] Tekhnologiya metallov. Izd.3., isp.,
dop. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po chernoi i
tsvetnoi metallurgii, 1962. 512 p. (MIRA 15:3)
(Metallurgy) (Metalwork)

AUTHOR: Butanov, I.N., Professor. 104-4-10/40
TITLE: On the advisability of cutting down the number of special-
ities and specialisations in technical colleges with partic-
ular reference to thermal engineering. (O tselescobraznosti
sokrashcheniya vtuzovskikh spetsialnostey i spetsializatsiy
na chastnom primere teploenergetiki.)
PERIODICAL: "Elektricheskie Stantsii" (Power Stations), 1957,
Vol. 28, No.4, pp. 34 - 35 (U.S.S.R.)

ABSTRACT: This article is a plea for a more all-round engineering
education and less specialisation. The author defines a spec-
ialisation as consisting of about 200 - 300 students working on
a very narrow line. A speciality consists of a group of
several specialisations. A faculty should unite several allied
specialities. A government decision of 1936 decided to cut
down the number of specialities and this trend continued until
the end of the war when pressure from industrial commissariats
resulted in the multiplication of specialities and the creation
of so-called specialisations which masked a tendency to organ-
ise a larger number of specialisations. However, the develop-
ment of production and engineering is already putting these
1/2 plans out of date. Students who have received training that
limits their work either to the boiler house or to the turbine

On the advisability of cutting down the number of specialities and specialisations in technical colleges with particular reference to thermal engineering. (Cont.)

104-4-10/40
room cannot so easily be used in stations employing the unit boiler-turbine block. Two neighbouring boiler-turbine units may be controlled from a single panel and the existing subdivision of specialities becomes meaningless. This tendency is likely to continue. Similarly the existing distinction between industrial and other thermal engineers is largely artificial. The further development of heat and electric power stations requires engineers of good overall training, particularly as these stations will also supply process steam to industry.

2/2
There is 1 Slavic reference.

AVAILABLE:

BUTANSKI, B. ; TOMOROV, N

"Standardization and its significance for transportation"

TRANSPORTNO DELO, Sofia, Bulgaria, Vol 11, no. 4, 1959

Monthly list of East Europe Accessions (EEAI), LC, Vol. 8, No 6, Sept 59
Unclass

BULGARIA / Chemical Technology. Chemical Products and H
Their Application. Food Industry.

Abs Jour: Ref Zhur-Khimiya, No 12, 1959, 44074.

Author : Butanskiy I.

Inst : Not given.

Title : Refrigeration Treatment of Meat in Hungary.

Orig Pub: Khranit. prom-st, 1958, 7, No 10, 44-45.

Abstract: No abstract.

Card 1/1

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